STATE OF MARYLAND
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Joint Subcommittee Hearing: BioWatch Present and Future: Meeting Mission Needs for Effective Biosurveillance?

Good afternoon, Chairman Bilirakis, Chairman Lungren, and Subcommittee Members:

My name is Frances Phillips. I am the Deputy Secretary for Public Health Services in the Maryland Department of Health and Mental Hygiene. In that role I oversee Public Health Emergency Preparedness for the Department. Thank you for giving me the opportunity to speak with you on this important topic. There are several points that I plan to speak about today, based on the experience that Maryland has had with the BioWatch program. I want to address our overall experience with BioWatch in Maryland, tell you about the benefits that have resulted from our participation in the program, and discuss some of the challenges inherent in the program.

First, I want to express Maryland's continued support of the BioWatch program as an important and useful addition to existing biosurveillance programs. BioWatch is still evolving and will continue to drive improved communications and foster more robust relationships as the technology advances.

Public health has a vital role in the detection, response to and recovery from bioterrorism and emerging infectious diseases. Public health has been in the business of monitoring population health, detecting diseases, and designing and implementing interventions to mitigate the impact of resulting diseases for generations. With the events of September 11, 2011 and the anthrax attack of that year, it became clear that new tools and systems needed to be developed to detect previously unimagined threats. Governor Martin O'Malley has been a strong supporter of

expanding biosurveillance capabilities within Maryland. In his first administration he published the Strategic Goals and Objectives for Homeland Security. Goal #5 sets out a vision for a statewide biosurveillance system that integrates new technology and traditional public health disease surveillance systems to monitor human illness and sensor based monitoring for chemical and radiological threats.

BioWatch is one of the several tools in the Public Health "tool box." Other tools include the Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE), Maryland's syndromic surveillance system. ESSENCE captures, aggregates and interprets electronic data reported daily by all Maryland hospitals on the nature and volume of emergency department visits, by over 300 pharmacies on prescription and over-the-counter pharmaceutical sales, by all Maryland school districts on student absenteeism, and by the Maryland Poison Control Center on the nature and volume of calls.

BioWatch, even with limitations that will be discussed later, has provided benefits to overall biosurveillance capability and complements tools such as ESSENCE. BioWatch is intended to reduce the time needed to identify potential incidents of covert bioterrorism. The sooner that exposures to dangerous pathogens are identified, the sooner interventions can be implemented and the rates of morbidity and mortality reduced. Another benefit of BioWatch is the standardization of sampling and testing protocols across all BioWatch areas. This allows for a common operating picture and ensures that national discussions of potential incidents are based on a shared analytical protocol and have a common terminology.

Maryland has worked with local jurisdictions, neighboring states and various federal agencies to collaborate on and continuously improve the management of BioWatch alerts. This collaboration has improved the evaluation of the alerts, identified gaps in coordination and resulted in enhanced communication and response capabilities across the region. In addition, the internal notification protocols at the State and local level have been strengthened as a result of evaluations after each BioWatch alert. The benefit of these enhanced protocols has reached across the all-hazards spectrum for Maryland.

From the Department's perspective, there are also challenges with the BioWatch program. This program is designed to be an "early warning" system. In instances when the technology produces an alert, a diverse and very expert team must be promptly convened for real-time interpretation and response decision-making. The ensuing situational analysis is based on relevant data drawn from clinical, environmental, technical and security intelligence. Clinical reporting systems include routine data reporting from sentinel laboratories as well as from ESSENCE. All of this data is needed to bring context to a Biowatch alert.

Our BioWatch response decision-making also requires integration of pertinent environmental and seasonal conditions, technical considerations regarding signal strength and coordinated threat assessment input from state and federal law enforcement, security and fusion center partners.

Certainly, when confirmatory testing is positive, a BioWatch alert triggers action. Interdisciplinary consultation among a team of experts representing state, local and federal

laboratorians, public health professionals, environmental experts, law enforcement officials, and emergency management officials is needed to fully assess the risk and to determine the appropriate protective response. Rigorous communication protocols have been developed and refined to direct a hierarchy of response communications.

The issue of 'false positives' is a familiar challenge to the BioWatch program. On a few occasions in Maryland the BioWatch system detected gene targets from naturally occurring microorganisms. These alerts were "true positives" in that the technology correctly detected the presence of a select organism, but were "false positives" in that the organism was later determined to be naturally-occurring and not a public health threat. None of these alerts resulted in the activation of a public response. However, the multi-agency collaboration and applied data integration associated with Biowatch alerts and exercises enhances our overall capability to respond to all manner of public health emergencies.

Maryland's Department of Health and Mental Hygiene maintains an effective working close relationship with the BioWatch Systems Program Office within the U.S. Department of Homeland Security Office of Health Affairs. This relationship has improved markedly over the years from what initially had been a very closed and top-down federal approach to what is now a far more collaborative partnership. This strong state-federal relationship is essential to the success of BioWatch since both routine laboratory operations and infrequent alerts require state and federal partners assume interdependent roles and responsibilities.

Every day of the week, the Maryland State Public Health Laboratory conducts highly regulated testing on filter samples delivered from various locations in the State. The federal BioWatch Office has supported our Lab's work through grants to cover a full-time lab scientist salary, supplies and equipment and administrative expenses. This has helped us upgrade our preparedness for a wide range of threats.

Our Department actively participates in the Baltimore/Washington/Richmond BioWatch Core Work Group which meets quarterly to coordinate planning, communications and exercises across the greater National Capital Area region.

Biosurveillance is a core component of preparedness. Using and exercising multiple systems has helped Maryland enhance its ability to identify and respond to a wide range of threats. We support continued improvement in BioWatch and other components of biosurveillance.

Thank you again for the opportunity to provide one state's perspective on these important issues.

That concludes my remarks. I would be happy to answer any questions you may have.